



Chapter 4-1

Forced Draft Fan

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4-1 Forced Draft Fan

4-1.1 Fan Specification and Construction Details

4-1.1.1 Specification

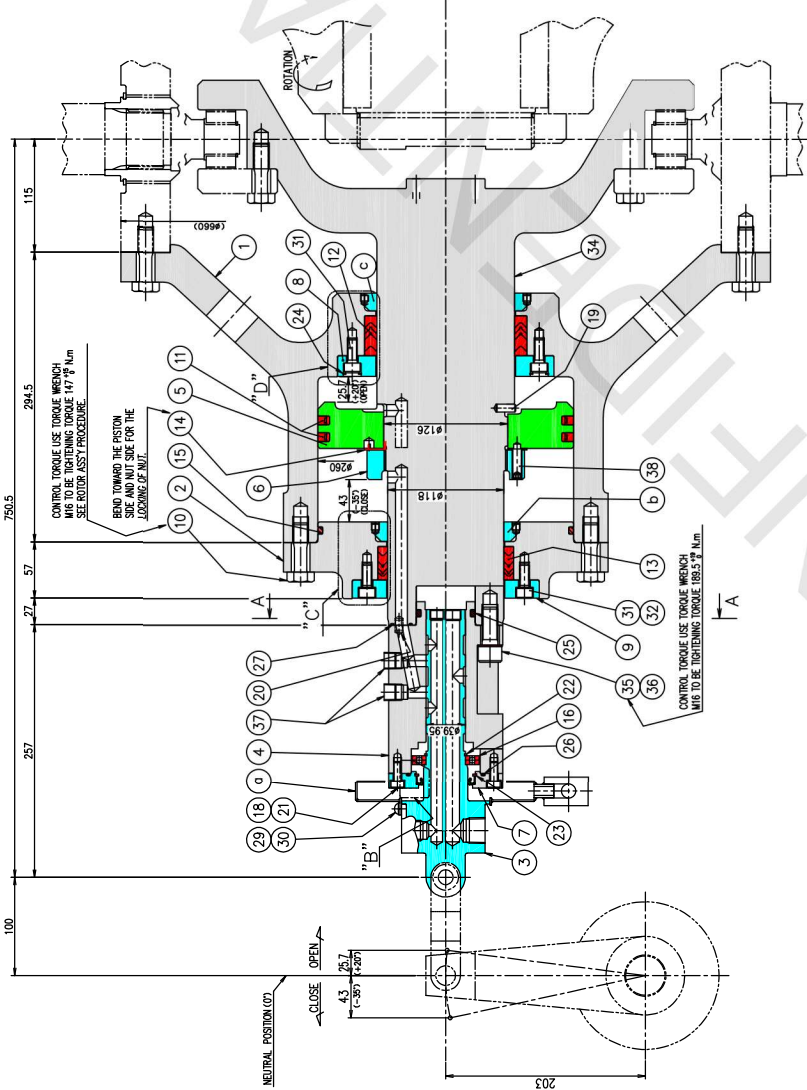
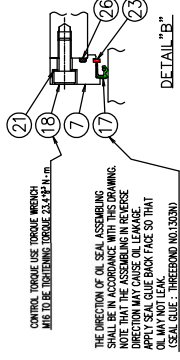
TABLE 4-1.1.1 FORCED DRAFT FAN

Subject		Specifications
Equipment number		Unit 5: 50HLB01AN101, 50HLB11AN101 Unit 6: 60HLB01AN101, 60HLB11AN101
Quantity		Two (2) per Unit
Fan	Manufacturer	MHPS
	Model	ML-H1-R132/270
	Type	Axial Fan, Variable Blade Control
Coupling	Manufacturer	MHPS
	Type	Rigid coupling (with intermediate shaft)
Bearing	Manufacturer	JTEKT Corporation
	Type	Anti-Friction bearing (MHPS special type)
Major material	Casing	Rolled Steel for General Structure
	Rotor	Forged Steel
	Moving Blade	Forged Aluminum
	Main Shaft	Forged Steel
	Bearing (Box/Body)	Cast Iron / Bearing Steel & Carburizing Steel
	Coupling	General Carbon Steel
Rotating Speed (Synchronous)		1000min ⁻¹
Blade		14
Performance Characteristics		
Direction of Rotation		Clockwise (Viewed from motor side)
Capacity (each fan)		20,600 m ³ /min
Suction press.		-4.9 mbar(g)
Discharge press.		44.1 mbar(g)
Fluid		Air
Fluid temperature at inlet		35°C
Fluid density (design)		1.128 kg/m ³

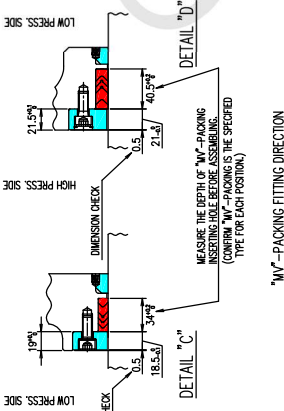
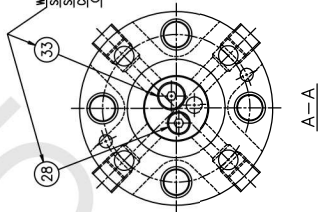
MARKS	DESCRIPTION	MATERIALS (ASTM/JIS)	1-PC WEIGHT (kg)
1	CYLINDER COVER	A578 G10450-N/S45C-N	14.4
2	CYLINDER COVER	A578 G10450-N/S45C-N	22.6
3	PILOT VALVE	A29 G4118/S20M20	3.0
4	PILOT SLEEVE	A335 CLASS A/S20M645	9.0
5	PISTON	A578 G10450-07/S45C-07	12.0
6	NUT	A578 G10350-N/S35C-N	1.58
7	PLATE FOR MV PACKING COVER	A36/SS400	0.92
8	PLATE FOR MV PACKING COVER	A36/SS400	3.4
9	PLATE FOR MV PACKING COVER	A36/SS400	2.28
10	BOLT M16x30	A193 G7.87-07/S20M35-07	0.11
11	PISTON RING	RUBBER	-
12	PISTON RING	RUBBER	-
13	WASHER M10	WI-7/SS500M	-
14	WASHER M10	A36/SS400	0.11
15	O RING 25x0	RUBBER	0.019
16	BEARING	A295 S2100/SU	0.13
17	OIL SEAL	NR	-
18	BOLT M8x20	A193 G7.87-07/S20M35-07	0.015
19	PARALLEL PIN 8x20	A295 S2100/SU2	0.008
20	PARALLEL PIN 8x10	A578 G10450-N/S45C-N	0.004
21	WASHER M6	WI-7/SS500M	0.001
22	RETAINING RING 40	A888 TYPE WF-0C/SK5M	0.008
23	RETAINING RING 60	A888 TYPE WF-0C/SK5M	-
24	RETAINING RING 18	A888 TYPE WF-0C/SK5M	0.001
25	WASHER M6	RUBBER	0.002
26	O RING 25x0	RUBBER	0.012
27	O RING 21x0	RUBBER	0.011
28	PLUG M4x1.5	A578 G10250-N/S25C-N	0.01
29	SCREW M6x12	A248 G10130/SWRM12	0.005
30	SPRING WASHER M6	A713 G10640/SWRM62	0.001
31	BOLT M10x25	A193 G7.87/S20M35	0.028
32	WASHER M10	WI-7/SS500M	0.001
33	PLUG M17x1.5	A578 G10250/S25C	0.02
34	PISTON SHIPT	A193 G7.87-07/S20M35-07	0.104
35	BOLT M16x40	A193 G7.87-07/S20M35-07	0.003
36	WASHER M16	WI-7/SS500M	0.002
37	SCREW M16x35	A193 G7.87/S20M35-07	0.19
a	DRAIN COVER	-	1.1
b	BUSH	-	0.81
c	BUSH	-	0.83

- NOTES:
- CHECK PISTON STROKE. (OPEN 25.7^{±0.05}mm, CLOSE 43^{±0.05}mm.)
 - CHECK STROKE OF PILOT VALVE. (14^{±0.05}mm.)
 - ON ASSY USE CARE NOT TO DAMAGE MV PACKINGS @ C AND OIL SEAL @.
 - MONITOR POINT AND ORIENTATION OF THE MV-PACKING IS SHOWN IN THE DRAWING @ "C" AND "D".
 - STAMP AT THE FOLLOWING SPACES OF THE PILOT VALVE, FLEXIBLE HOSE CONNECTION, OIL SUPPLY : STAMP "R" (RED PAINT)
OIL RETURN : NO STAMP (NO PAINT)
PILOT LEAK : STAMP "G" (GREEN PAINT)
OIL SEAL LEAK : STAMP "W" (WHITE PAINT)

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WHEN ASSY, CONFIRM PLUG IS NOT STICKING OUT FROM SURFACE OF PILOT VALVE. APPLY SEAL GLUE ALL AROUND SO THAT OIL MAY NOT LEAK. PUNCHING AT Z PLACES ON CIRCUMFERENCE AFTER TIGHTENING.
 (SEAL GLUE: THREEBOND NO.1303N)



- BE SURE TO ASSEMBLY THE "MV"-PACKING IN THE DIRECTION INDICATED IN THIS DRAWING AS IT MAY CAUSE OIL LEAKAGE IF ASSEMBLED IN REVERSE DIRECTION.
- BE SURE TO FASTEN THE FITTING BOLTS UPON CONFIRMATION THAT THE PLATE FOR MV PACKING SINCS BY 0.5mm FOR THE CENTRE SURFACE OF CYLINDER COVER.

FIGURE 4-1.1.6 HYDRAULIC MECHANISM ASSEMBLY

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